



Hillier Ecology

Preliminary Roost Assessment and Bat Activity Survey at Wood Farm, Collyweston, Northamptonshire



Rutland County Homes

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Hillier Ecology Limited
127 Fletton Avenue, Peterborough, PE2 8BX
Office: 01733 894979 Mobile: 07730 758439
howardwhillier@btinternet.com

Site Name	Wood Farm, Collyweston
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Client	Rutland County Homes

	Name	Position
Surveyed by	Howard Hillier Deborah Hillier	Principal Ecologist Ecologist
Prepared by	Howard Hillier	Principal Ecologist
Checked by	Deborah Hillier	Ecologist

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VALIDITY

Due to the dynamic nature of ecological conditions the results of the survey(s) and related conclusions and recommendations as contained within this report should only be considered valid for up to 24 months from the date the last survey was undertaken.

Any alterations to the site proposals may invalidate the recommendations contained within this report.

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1.0 Summary

1.1 A Preliminary Roost Assessment was carried out at Wood Farm, Collyweston, Northamptonshire.

1.2 The building inspections identified that Buildings 1, 2 had negligible potential to support roosting bats. There was no evidence of bat usage, access points or suitable roosting features. Building 3 had some access points, suitable roosting features and evidence in the form of feeding remains.

1.3 It was recommended that one Bat Activity Survey was carried out to confirm the presence/absence of bat species (Table 1).

1.4 During the Bat Activity Survey no bats were seen emerging from the building or inside. Two common bat species were using the site for foraging and commuting (Table 2).

1.5 No further bat surveys are required.

1.6 There was no evidence of nesting birds using the buildings.

1.7 No further bird surveys are required.

1.8 Overall the site is of moderate ecological value.

2.0 Introduction

2.1 Hillier Ecology Limited were commissioned by Rutland County Homes to carry out a Preliminary Roost Assessment and a Bat Activity Survey on a barn at Wood Farm, Collyweston.

2.2 The survey was carried out to support the planning application to convert the building to a dwelling.

3.0 Site Details

3.1 The site is located at NGR SK9957202781 (Appendix 1).

3.2 The site is situated in the village of Collyweston in North Northamptonshire, the site and its surrounds are made up of the following habitats:

- 2 storey dwelling
- Mature garden
- Assorted buildings
- Hardstanding
- Amenity grassland
- Dwellings
- Gardens

3.3 The diversity of habitats found is thought to be suitable for sustaining some protected species.

3.4 The buildings are constructed as follows and shown in the photographs below and (Appendix 2).

Building Name/Number	1			
Building Grid Reference	SK9957002768			
Type of Building	Garage/Store			
Age of Building	20 th century			
Condition of Building	Good			
Wall Construction	Stone			
Roof Construction	Pantile			
Roof Type	Sloping			
Potential Access Points	No visible access			
Roof Void	Yes		No	X
Insulation	Yes		No	X
Structure of Roof	Queen			
Roof Lining	Felt			
Dimensions of Roof Void	Not applicable			
Suitable Roosting Features	None			
Evidence of Bats	None			
Evidence of Birds	None			
Potential to Support Roosting Bats	Negligible			
Suitable for Hibernating Bats	No			



Plate 1 Building 1

Building Name/Number	2			
Building Grid Reference	SK9955502769			
Type of Building	Garage			
Age of Building	19 th Century			
Condition of Building	Good			
Wall Construction	Stone/brick			
Roof Construction	Pantile			
Roof Type	Gable			
Potential Access Points	No visible access points			
Roof Void	Yes		No	X
Insulation	Yes		No	X
Structure of Roof	Queen			
Roof Lining	Felt			
Dimensions of Roof Void	Not Applicable			
Suitable Roosting Features	None			
Evidence of Bats	None			
Evidence of Birds	None			
Potential to Support Roosting Bats	Negligible			
Suitable for Hibernating Bats	No			



Plate 2 Building 2



Plate 3 Building 2 - Internal



Plate 4 Building 2 - Internal



Plate 5 Building 2 - End View

Building Name/Number	3			
Building Grid Reference	SK9956402789			
Type of Building	2 Storey Barn			
Age of Building	19th Century			
Condition of Building	Good			
Wall Construction	Stone with small timber extension			
Roof Construction	Collyweston Slate with Velux Windows			
Roof Type	Gable/Sloping			
Potential Access Points	Hole in door, gaps in stonework where soffit removed			
Roof Void	Yes		No	X
Insulation	Yes		No	X
Structure of Roof	Not Applicable			
Roof Lining	Celotex Board			
Dimensions of Roof Void	Not applicable			
Suitable Roosting Features	Gaps in stonework, between beam and stonework, around window frame, gaps in Celotex Board			
Evidence of Bats	Possible Feeding Remains			
Evidence of Birds	None			
Potential to Support Roosting Bats	Low			
Suitable for Hibernating Bats	No			



Plate 6 Building 3



Plate 7 Building 3



Plate 8 Building 3 - Internal



Plate 9 Roosting Feature



Plate 10 Roosting Feature

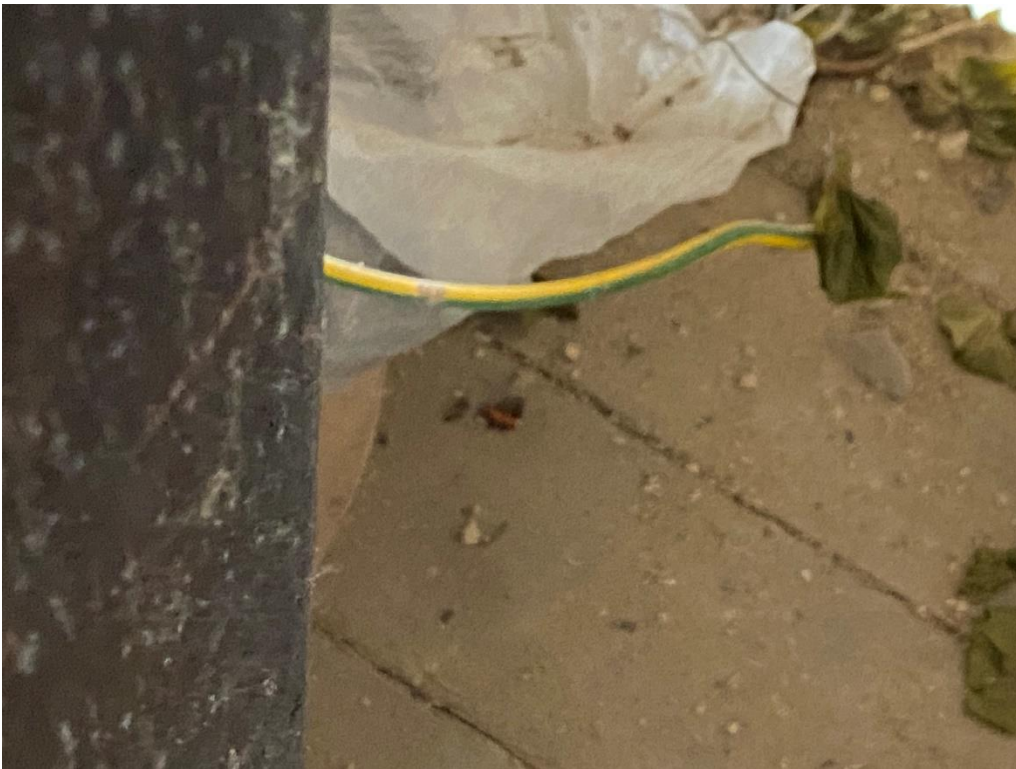


Plate 11 Possible Feeding Remains



Plate 12 Roosting Feature



Plate 13 Access Point

4.0 Survey Methodologies

Bats (Buildings)

4.1 The buildings were assessed as to their potential to hold bat roosts.

4.2 The building surveys involved a thorough external and internal search of all suitable cavities, holes and crevices, all suitable areas and floors were inspected for the following signs:

- Bat droppings
- Stains around roosting places and entrance points
- Urine marks
- Prey remains
- Areas devoid of cobwebs
- Live or dead bats
- Suitable cracks and crevices for bats to enter

4.3 The buildings were categorised using the criteria below:

Assessment of Potential to Support Roosting Bats - Categories for Buildings	
Negligible potential	Buildings with no features capable of supporting roosting bats. Often these buildings are of a 'sound' well-sealed nature or have a single skin and no roof void. They tend to have high interior light-levels, and little or no insulation. Buildings without any roofs may also fall into this category.
Low potential	Buildings with limited features for roosting bats (e.g. shallow crevices where mortar is missing between building blocks/bricks). They may have open locations which may be subject to large temperature fluctuations and bat-access points may be constrained. No evidence of bats found (e.g. droppings / staining). Buildings may be surrounded by poor or sub-optimal bat foraging habitat. No evidence of bats found.
Moderate potential	Buildings with some features suitable for roosting bats. Buildings usually of brick or stone construction with a small number of features of potential value to roosting bats e.g. loose roof / ridge tiles, gaps in brickwork, gaps under fascia boards, and/or warm sealed roof-spaces with under-felt. Evidence of bats found a small scattering of droppings or urine staining. Could be suitable for summer day roost.
High potential	Buildings with a large number of features or extensive areas of obvious potential for roosting bats. Generally, they have sheltered locations, with a stable temperature regime and suitable bat-access points. Evidence of bats found droppings/urine staining. Could be suitable for a maternity roost or summer day roost.
Confirmed roost	Bats discovered roosting within the building or recorded emerging / entering the building at dusk / dawn. A confirmed record (as supplied by an established source such as the local bat group) would also apply to this category.

Bats (Emergence and Activity)

4.4 The equipment used for the Emergence and Activity Survey was an Echo Meter Touch 2 Pro detector to record calls; Kaleidoscope computer software was used to carry out sound analysis, infra-red torches were also used.

4.5 The surveys followed the recommendations in Bat Conservation Trust Bat Surveys for Professional Ecologists Good Practice Guidelines.

4.6 The emergence/activity surveys started fifteen minutes before sunset and ended one hour and thirty minutes to two hours after sunset. This allowed for the variation in emergence times of bats to be covered.

Birds

4.7 An assessment of the buildings suitability to support breeding birds has been carried out.

4.8 All birds seen and heard were recorded.

5.0 Survey Results

Bats

5.1 The surveys were carried out by Howard Hillier, who holds Natural England Bat Survey Licence Number 2016-21564-CLS-CLS, assisted by Deborah Hillier an experienced bat worker.

5.2 The building surveys were carried out on 8th April 2021 in the following weather conditions; overcast, Beaufort Windscale 3 and a temperature of 9°C.

5.3 Buildings 1, 2 were considered to have negligible potential to support roosting bats with no evidence of bat usage, access points or suitable roosting features. Building 3 was considered to have low potential to support roosting bats, there were access points, roosting features and possible feeding remains.

5.4 The nocturnal surveys were completed on the dates shown below:

Table 1 Surveys Completed

Date	Sunset Time	Start Time	End Time	Start Temp. (°c)	End Temp. (°c)	Wind (Beaufort)	Precipitation	% Cloud Cover
29/05/2021	21.10	20.55	22.40	14	10	0	None	0

5.5 The survey results are shown in the tables below:

Table 2 Survey Results 29th May 2021

Location Internal	Species/Number	Passes	Social Calls	Feeding Buzzes	Time	Comments
1	NO SPECIES RECORDED					

Location External	Species/Number	Passes	Social Calls	Feeding Buzzes	Time	Comments
2	Noctule <i>Nyctalus noctula</i>	X			21.44	Flying over
2	Common Pipistrelle <i>Pipistrellus pipistrellus</i>	X			21.44	Flying over
2	Common Pipistrelle	X		X	21.46	Feeding
2	Common Pipistrelle	X		X	21.48-21.50	Feeding
2	Noctule	X			21.59	Flying over
2	Common Pipistrelle				22.01	Unseen
2	Common Pipistrelle				22.04	Unseen
2	Common Pipistrelle				22.11	Unseen
2	Common Pipistrelle				22.15-22.17	Unseen
2	Soprano Pipistrelle				22.19	Unseen
2	Common Pipistrelle				22.23	Unseen
2	Common Pipistrelle				22.27	Unseen

5.6 The Bat Activity Survey recorded two species of bat foraging and commuting: Common Pipistrelle and Noctule.

5.7 No bat species were recorded internally or emerging from Building 3.

5.8 The locations of the surveyors are shown in (Appendix 3).

Birds

5.9 There was no evidence of nesting birds in any building.

6.0 Conclusions

Bats

6.1 Buildings 1 and 2 had negligible potential to support roosting bats. Building 3 had low potential to support roosting bats and the Bat Activity Survey confirmed that the building is not being used as a bat roost.

6.2 The site and surrounds are being used by bat species for foraging and commuting.

Birds

6.3 The buildings did not show any evidence of nesting birds and no further bird surveys are required.

General

6.4 Overall the site is of moderate ecological value and will benefit from enhancement.

7.0 Recommendations

Bats

7.1 To provide enhancements bat boxes should be installed in the barn conversion in south facing positions at a height not less than three metres.

7.2 It will be necessary to employ a bat friendly lighting scheme avoiding lighting to newly created roost features as well as generally directing light downwards using hoods and cowls as appropriate.

Birds

7.3 The installation of bird boxes will enhance biodiversity; this should comprise of Sparrow Terraces, Swift boxes and House Martin nests installed between north and east at heights of two to four metres.

7.4 Recommendations are shown in (Appendix 4).

8.0 Legal Protection

Bats

8.1 The Conservation of Habitats and Species Regulations 2017 transpose into UK law Council Directive 92/43/EEC of 1992 (often referred to as the Habitats Directive). All bats are listed under Annex IV and some (horseshoe bats, Bechstein's and Barbastelle) are also listed under Annex II which relates to Special Areas of Conservation. These Regulations make it an offence to:

- Deliberately capture, injure or kill a bat.
- Deliberately disturb bats in a way as to be likely significantly to affect the ability of any significant groups of bats to survive, breed, rear or nurture their young, or to affect the local distribution of abundance of that species.
- Damage or destroy a breeding site or resting place of a bat.
- Keep, transport, sell or exchange, or offer for sale or exchange a live or dead bat or any part of a bat.

8.2 In addition the Wildlife & Countryside Act 1981 (as amended) makes it an offence to:

Intentionally or recklessly

- Disturb any bat whilst it is occupying a structure or place which it uses for shelter or protection.
- Obstruct access to any structure or place which any bat uses for shelter or protection.

8.3 Penalties are fines of up to £5000 per bat and up to a 6 month custodial sentence.

Birds

8.4 All common wild birds are protected under The Wildlife and Countryside Act 1981 (as amended). Under this legislation it is an offence to:

- Kill, injure or take any wild bird.
- Take, damage or destroy the nest of any wild bird while it is in use or being built.
- Take or destroy the egg of any wild bird.

8.5 Certain rare breeding birds are listed on Schedule 1 of The Wildlife and Countryside Act 1981 (and as amended). Under this legislation they are afforded the same protection as common wild birds and are also protected against disturbance whilst building a nest or on or near a nest containing eggs/unfledged young.

The Natural Environment and Rural Communities Act (2006)

8.6 Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006) sets out a list of habitats and species that are of principal importance for the conservation of biodiversity in England. The list (including 56 habitats and 943 species) drawn up in consultation with Natural England, provides a guide to local and regional authorities when implementing their duty as defined in Section 40 of the NERC Act 2006;

- “Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.” - Section 40(1).
- “Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat”. - Section 40(3).
- **National Planning Policy Framework (2019)**

8.7 National Planning Policy Framework (NPPF) (2019) sets out Government Policy on Biodiversity and Nature Conservation and places a duty on planners to make material consideration to the effect of a development on legally protected species when considering planning applications. NPPF also promotes sustainable development by ensuring that developments take account of the role and value of biodiversity and that it is conserved and enhanced within the development.

9.0 References

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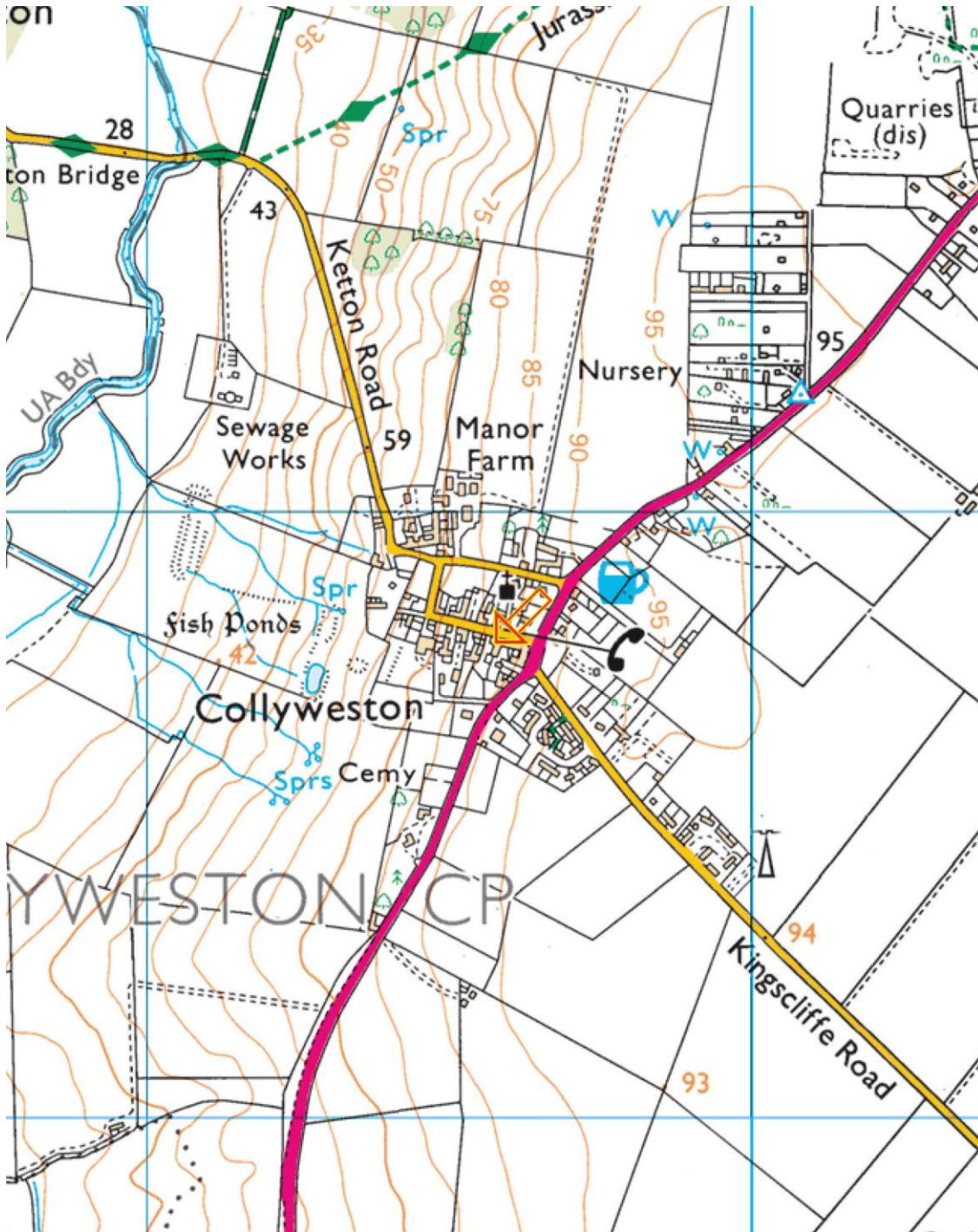
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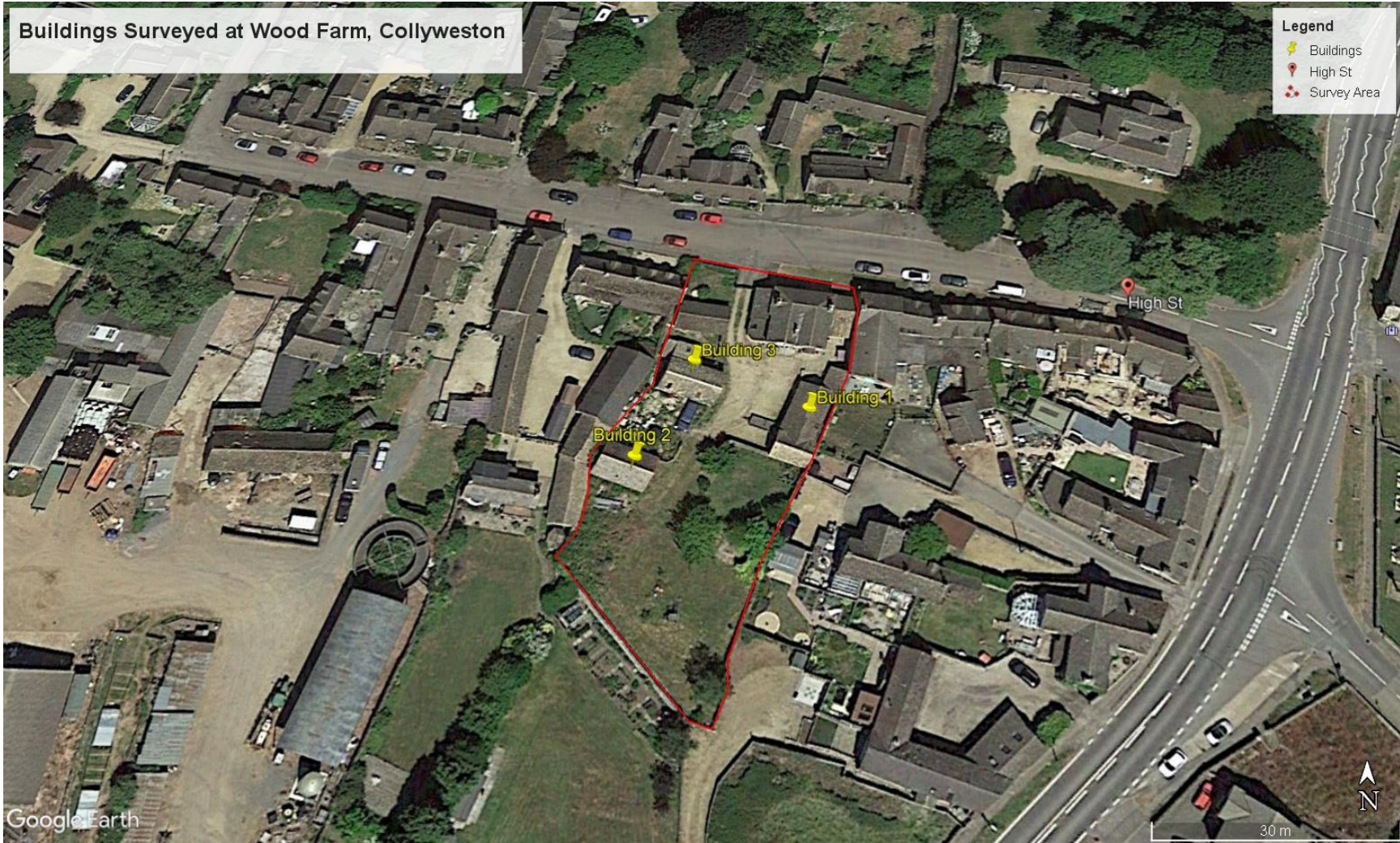
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10.0 Appendices

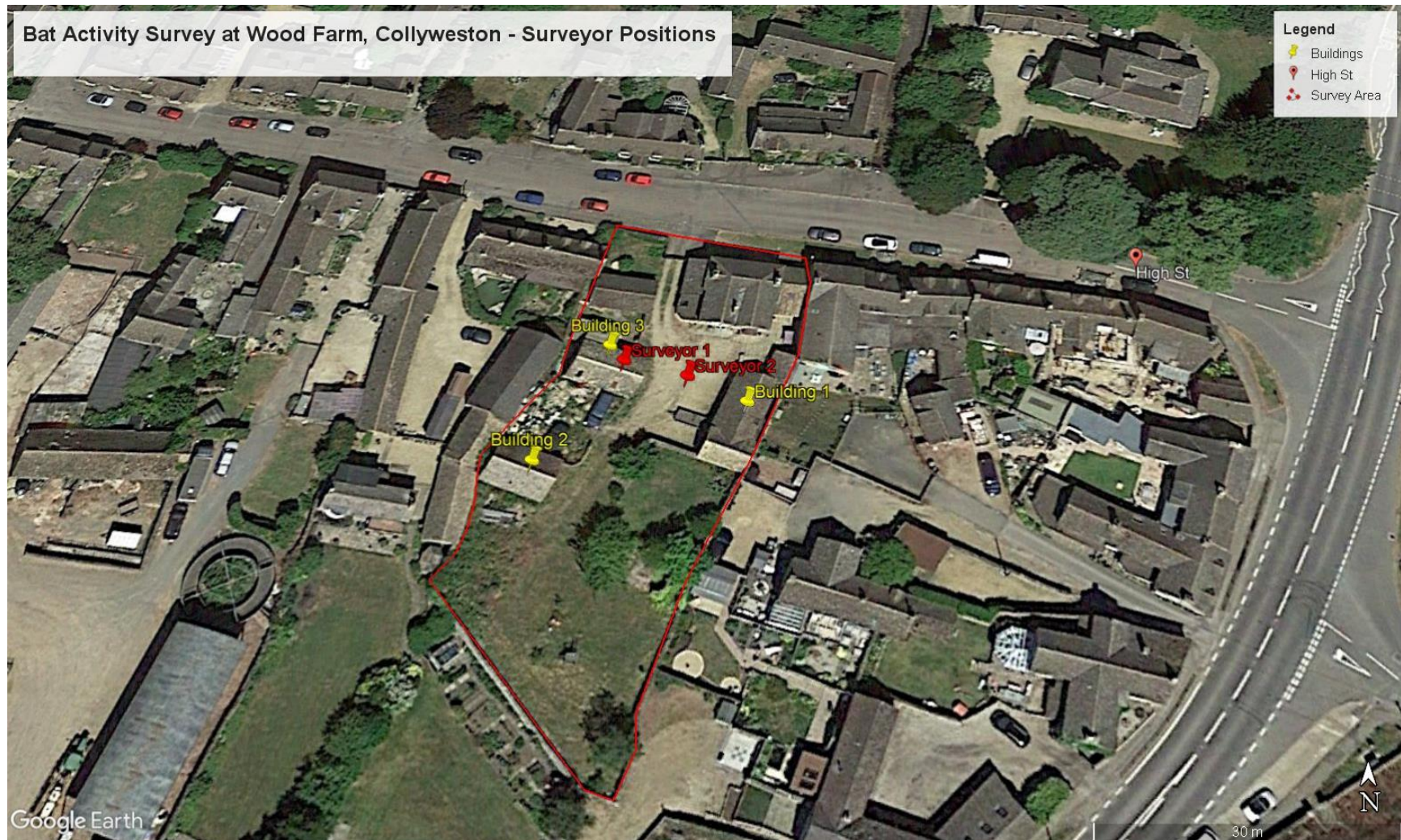
Appendix 1 Site Location



Appendix 2 Buildings Surveyed



Appendix 3 Surveyor Positions



Appendix 4 Recommendations

Bat Boxes

Beaumaris Woodstone Bat Box



Suitable for crevice dwelling bats, the Beaumaris Bat Box is made from 100% woodstone and is available in two sizes.

These boxes have a rough interior to provide lots of grip. They have good thermal insulation, reducing temperature fluctuations within the box. They are painted black to best absorb the sun's heat, which is important as bats need to increase their body temperature before they emerge in the evening.

Suitable for wall mounting.

Woodstone is very strong and durable, so this product has a 10 year warranty.

Bird Boxes



The House Sparrow Nest Box is from the Vivara Pro range and is manufactured from WoodStone - a mix of concrete and FSC wood fibres. This material is strong and highly insulating which helps to provide a thermally stable

environment within the box. It also protects against damage from predators such as woodpeckers, squirrels and cats. It has two breeding chambers making it particularly suitable for house sparrows as they prefer to nest in colonies.

The House Sparrow Nest Box can be integrated into the masonry of a new house or fixed onto an external wall using strong screws and wall plugs (not included). If possible, it should be positioned near to vegetation and at a minimum of 2 m above ground.



A double House Martin nest box made from a mixture of concrete and wood fibres, suited for placing in the eaves.



The Burgos Swift Nest Box is made entirely from woodstone material and has the entrance on the front of the box.

Ideally this nest box should be hung directly under a roof overhang or gutter, avoiding direct sunlight. Comes with a metal bracket to make mounting this box easy - simply fix the metal bracket to the wall and slide the box over the bracket to hold it firmly in place.